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# NASA Procedural Requirements

**COMPLIANCE IS MANDATORY**

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## **Subject: Technical Standards for NASA Programs and Projects**

**Responsible Office: Office of the Chief Engineer**

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## **Chapter 3. Selection and Use of Technical Standards Products**

*Note: A technical standard or specification is not "self-imposing," i.e., it is not mandatory for use by a performing entity unless: (1) Cited as a requirement within a NASA directive or U.S. law. (2) Invoked by other NASA requirements documents (e.g., contracts, including, but not limited to, the JPL contract and program/project documents). Requirements in technical standards and specifications are identified by using the word "shall" and denote mandatory compliance by programs and projects.*

### **3.1 Selection of Technical Standards Products**

3.1.1 Program and project managers, in conjunction with the appropriate Technical Authority, shall select technical standards products based on currency and applicability for use as program/project requirements according to the following order of priority:

- a. Technical standards required by legal requirements.
- b. Technical standards products designated as mandatory by NPDs and NPRs.
- c. Technical standards products necessary to promote mission success and engineering excellence. When all other factors are the same, select in the following order of precedence:
  - (1) Voluntary consensus standards, domestic and international.
  - (2) NASA or other Government technical standards products.1

3.1.2 Program and project managers, in conjunction with the appropriate Technical

Authority, shall select current versions of technical standards products except when justified as impractical or incompatible with requirements.

*Note: Promote commonality in the use of technical standards products across NASA.<sup>1</sup>*

3.1.3 Program and project managers shall review lessons learned, including but not limited to, those in the NASA Lessons Learned Information System, for applicability to current technical standards applications.

3.1.4 Program and project managers, NASA Headquarters offices, and Center Directors shall give preference to performance (outcome-based) standards in program/project technical requirement specifications over prescriptive design or process (product-based) standards.

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<sup>1</sup> Consider NASA-endorsed technical standards products, accessible at <https://standards.nasa.gov>, first.

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## 3.2 Tailoring of Technical Standard and Specification Requirements

3.2.1 NASA Headquarters offices and program and project managers shall:

- a. Tailor, when necessary, selected technical standard or specification requirements (i.e., document necessary changes) to meet specific application needs and to avoid over- or under-specification of requirements.
- b. In the case when the technical standard or specification is invoked by a NASA directive or other NASA requirements document (e.g., a contract), document traceability of tailored requirements to the original standard or specification requirements and obtain approval from the appropriate Technical Authority as required by NPR 7120.5, NPR 7120.7, NPR 7120.8, NPR 8900.1, Health and Medical Requirements for Human Space Exploration, and for Safety and Mission Assurance, by NPR 8715.3, NASA General Safety Program Requirements, and NASA-STD-8709.20.

*Note: Tailoring of technical standards and specifications required by law or Federal regulation requires General Counsel and Technical Authority involvement.*

- c. Ensure that requirements from voluntary consensus, other Government organizations, and NASA technical standards products used as requirements in program and project documentation are traceable to the original standards product and track changes for review and potential revision to program/project requirements.

## 3.3 Use of Technical Standards Products

3.3.1 Program and project managers shall:

- a. Use established voluntary consensus standards, both domestic and international, in lieu of other Government organizations and NASA technical standards products as program/project requirements unless use of such standards products would be inconsistent with applicable laws or NASA NPDs/NPRs, technically inadequate, or otherwise impractical.
- b. Evaluate NASA-endorsed technical standards products for use when selecting

program and project requirements.

c. Register to receive notification of changes to technical standards products imposed as requirements at <https://standards.nasa.gov>.

d. Review changes to imposed standards products to determine the need for revision of program/project requirements.

### 3.4 Agency's Annual Report on Standards

3.4.1 NASA Headquarters offices and Center Directors, or their designees, shall submit to the NASA Chief Engineer input for NASA's annual report to NIST as required by OMB Circular No. A-119 describing NASA's use of voluntary consensus standards, participation in the development of voluntary consensus standards and voluntary consensus standards bodies, and conformity assessment based on guidance issued by the Secretary of Commerce.

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